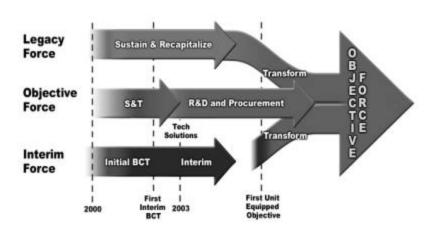






## Armament for the Army in Transition The Interim Brigade Combat Team (IBCT)

Presented to:
NDIA Firepower
Conference



Briefer: Mr. Ty Cobb Advanced Systems Concepts Office

TACOM – ARDEC, Picatinny Arsenal, NJ

20 Jun 01

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Initial	I BCTs	terim BCTs		nanced im BCTs		
Arm Of Exce	•	Objec	Gen 1 FCS	? Gen 3	en X	
Digitize (4I) Di	2-5-0-200	& 101st Air A	Aslt Div			
99 00	03	10	15	20	25	32

For pictorial purposes only

Timeline not to scale

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2/10



# **Brigade Combat Team**



### **Capability Enhancements**



XM 982 155mm Artillery Cargo Round

XM 777 Light Weight 155mm Howitzer





**SADARM** 

# **Brigade Combat Team**



**Capability Enhancements** 



PAYLOAD
54 each M80
w/ Self-Destruct
(6 decks of 9)

(cross sectional)

ROCKET MOTOR

FIN ASSEMBLY

COMPOSITE BODY

MULTIFUNCTIONAL
ELECTRONIC FUZE
(rocket initiation

**Mortar Fire Control System (MFCS)** 



DPICM 120mm ER Mortar Cartridge (XM984)

and payload expulsion)

**PGMM** 

33 lbs



## **Brigade Combat Team**



### **Capability Enhancements**



**Objective Crew Served Weapon (OCSW)** 



Objective Individual Combat Weapon (OICW)



**Common Remotely Operated Weapons System (CROWS)** 

### **TACOM-ARDEC IBCT Capability Enhancements**



#### West Point War-Fighters' Worksheet

Rank	Weapon/Item	Comments
	Weapon/Item Adv Optical Mortar Sights	
	AP Obstacle Breaching Sys	
	Auto Reg 1-D f/ 155mm Proj	
	Boom Gun	
	Canister Rd (AP), 90-105mm	
	CROWS	
	Demo Kit f/ Engineers	
	Enhanced Delivery Sys - Air	
	Excalibur Proj, 155mm	
	Explosive Standoff Mine Clearer	
	ER DPICM Mortar Rd, 120mm	
	HEP Rd, 90-105mm	
	JLW 155mm Howitzer, Towed	
	Mobile Counter Sniper Sys	
	Mortar Fire Control Sys	
	Non-Lethal Acoustic Sys	
	OCSW	
	OICW	
	PLS "SHOE"	
	PGMM, 120mm	
	PI-SADARM, 155mm	
	PI-WAM	
	QR-LAW	
	Roller Platform f/Air Deploy	
	SADARM Mortar Rd, 120mm	
	Urban Target Rd f/ TOW	
	Volcano Light	

## West Point Warfighters' Experience Statistics

Rank / Branch	MAJ/AR	E-7/IN	E-8/IN	MAJ/IN	E-7/IN	CPT/EN	MAJ/FA	CPT/MP	CPT/SC	CPT/IN
Years in Branch	8	17	15	6	11	10	9	11	5	8
Desert Storm vet	Υ	N	N	N	N	Υ	Υ	Υ	N	N
Peace Keeping Vet / Mo	N	N	N	Y/9	Y / 10	) N	N	Y / 11	Y/5	N



#### Grunt with Helmet Over Black Beret



Auto Reg 1-D f/155mm Proj	MERICA	Weapon / Item	Ту	MAJ Morin	Dave	Median	Top 3	Pair-Wise	
ER DPICM Mortar Rd, 120mm  JLW 155mm Howitzer, Towed PGMM, 120mm  PI-SADARM, 155mm  B 11 6 12 13 12  PI-WAM  SADARM Mortar Rd, 120mm  Adv Optical Mortar Sights  PObstacle Breaching Sys  Tr 14 26 18 23 19  Boom Gun  Canister Rd (AP), 90-105mm  CROWS  Demo Kit //Engineers  Roller Platform t//Air Deploy  PLS "SHOE"  Enhanced Delivery Sys - Air  Explosive Standoff Mine Clearer  HEP Rd, 90-105mm  Demo Kit //Engineers  Roller Platform t/Air Deploy  PLS "SHOE"  Enhanced Delivery Sys - Air  Explosive Standoff Mine Clearer  HEP Rd, 90-105mm  QR - LAW  Obj Crew Served Weapon  OgR-LAW  Urban Target Rd // TOW  11 18 12 22 16 22  Volcano Linft  Volcano Lin	Marine 8	Auto Reg 1-D f/155mm Proj	9	9	14	23	25	23	III.
JLW 155mm Howitzer, Towed PGMM, 120mm PI-SADARM, 155mm B B 11 B 12 B 14 B 15 B 12 B 13 B 12 B 14 B 15 B 12 B 13 B 12 B 14 B 15 B 16 B 17 B 18 B 18 B 17 B 18 B 18 B 18 B 18		Excaliber Proj, 155mm	14	7	13	14	11	14	PARTES.
PGMM, 120mm PI-SADARM, 155mm B B 11 C DI-SADARM, 155mm B B 11 C DI-SADARM, 155mm B B 11 C DI-WAM B SADARM Mortar Rd, 120mm B SADARM MORTAR Rd SADARM MORTAR Rd SADARM MORTAR Rd SADARM MORTAR Rd SADARM		ER DPICM Mortar Rd, 120mm	19	8	4	9	10	9	
PI-SADARM, 155mm  PI-WAM  PI-WAM  24  10  9  17  18  18  SADARM Mortar Rd, 120mm  23  23  24  21  15  17  Adv Optical Mortar Sights  27  27  27  27  11  20  11  AP Obstacle Breaching Sys  17  14  26  18  23  19  Boom Gun  16  24  25  24  26  24  Canister Rd (AP), 90-105mm  12  13  T  T  CROWS  1  Solven Kit //Engineers  26  26  22  13  Roller Platform t/Air Deploy  22  25  20  16  4  16  PLS "SHOE"  10  20  21  27  Enhanced Delivery Sys - Air  Explosive Standoff Mine Clearer  15  15  16  Mortar Fire Control System  7  16  16  16  16  16  16  17  17  26  19  26  10  27  28  28  29  24  21  Mobile Counter Fire System  7  16  16  16  16  17  20  21  21  Mortar Fire Control System  6  4  3  17  17  26  19  26  19  26  Obj Crew Served Weapon  3  17  17  27  28  7  28  Volcanol Light  18  19  10  8  9  8  Volcanol Light  18  19  10  8  9  8  Volcanol Light  18  19  10  8  9  8  Volcanol Light  18  19  20  21  22  25  26  26  29  20  21  21  22  25  26  26  29  24  21  21  21  22  23  24  21  26  26  27  27  27  27  27  27  27  27	FOR THE	JLW 155mm Howitzer, Towed	4	<u>6</u>	2	4	17	4	
PI-WAM SADARM Mortar Rd, 120mm 23 23 24 21 15 17 Adv Optical Mortar Sights 27 27 27 27 11 20 11 AP Obstacle Breaching Sys 17 14 26 18 23 19 Boom Gun 16 24 25 24 26 24 26 24 Canister Rd (AP), 90-105mm 12 13 7 15 6 15 CROWS 1 Demo Kit f/Engineers 26 26 22 13 22 13 Roller Platform f/Air Deploy 22 25 20 16 4 16 PLS "SHOE" 10 20 21 27 Enhanced Delivery Sys - Air 18 12 19 6 6 5 6 Explosive Standoff Mine Clearer 15 15 18 10 21 10 HEP Rd, 90-105mm 2 22 8 20 24 21 Mobile Counter Fire System 7 16 16 16 6 3 6 Mortar Fire Control System 6 4 3 1 7 17 26 19 26 19 26 10 27 28 7 27 28 7 28 7 4 4 7 4 7 8 7 4 7 4 7 8 7 4 7 4 7 8 7 4 7 4		PGMM, 120mm	(5)	2	15	19	14	20	
PI-WAM SADARM Mortar Rd, 120mm 23 23 24 21 15 17 Adv Optical Mortar Sights 27 27 27 27 11 20 11 AP Obstacle Breaching Sys 17 14 26 18 23 19 Boom Gun 16 24 25 24 26 24 26 24 Canister Rd (AP), 90-105mm 12 13 7 15 6 15 CROWS 1 Demo Kit f/Engineers 26 26 22 13 22 13 Roller Platform f/Air Deploy 22 25 20 16 4 16 PLS "SHOE" 10 20 21 27 Enhanced Delivery Sys - Air 18 12 19 6 6 5 6 Explosive Standoff Mine Clearer 15 15 18 10 21 10 HEP Rd, 90-105mm 2 22 8 20 24 21 Mobile Counter Fire System 7 16 16 16 6 3 6 Mortar Fire Control System 6 4 3 1 7 17 26 19 26 19 26 10 27 28 7 27 28 7 28 7 4 4 7 4 7 8 7 4 7 4 7 8 7 4 7 4 7 8 7 4 7 4		PI-SADARM, 155mm	8	11	(5)	12	13	12	
Adv Optical Mortar Sights  AP Obstacle Breaching Sys  17 14 26 18 23 19  Boom Gun  16 24 25 24 26 24  Canister Rd (AP), 90-105mm  12 13 7 15 6 15  CROWS  1 6 6 3 2 3 3  Demo Kit f/Engineers  26 26 22 13 22 13  Roller Platform f/Air Deploy  22 25 20 16 4 16  PLS "SHOE"  10 20 21 27 12 27  Enhanced Delivery Sys - Air  Explosive Standoff Mine Clearer  15 15 18 10 21 10  HEP Rd, 90-105mm  2 22 8 20 24 21  Mobile Counter Fire System  7 16 16 6 6 3 6 3 6 5  Mortar Fire Control System  8 4 3 1 7 2  Non-Lethel Acoustic System  13 17 17 26 19 26  Obj Crew Served Weapon  Obj Individual Combat Weapon  QR-LAW  21 19 10 8 9 8  Urban Target Rd f/ TOW  11 18 12 22 16 22  Volcano Light  Volcano Light  Volcano Light  25 21 23 25 27 25		PI-WAM	24	10	_	17	18	18	
AP Obstacle Breaching Sys  Boom Gun  16 24 25 24 26 24  Canister Rd (AP), 90-105mm  12 13 7 15 6 15  CROWS  1 5 6 22 13 22 13  Demo Kit f/Engineers  26 26 26 22 13 22 13  Roller Platform f/Air Deploy  22 25 20 16 4 16  PLS "SHOE"  10 20 21 27 12 27  Enhanced Delivery Sys - Air  Enhanced Delivery Sys - Air  Explosive Standoff Mine Clearer  15 15 18 10 21 10  HEP Rd, 90-105mm  2 22 8 20 24 21  Mobile Counter Fire System  7 16 16 5 3 5  Mortar Fire Control System  6 4 3 1 7 2  Non-Lethel Acoustic System  Obj Crew Served Weapon  Obj Individual Combat Weapon  QR-LAW  Urban Target Rd f/ TOW  11 18 12 22 16 22  Volcano Light  Volcano Light  Volcano Light  Volcano Light  25 21 23 25 27 25		SADARM Mortar Rd, 120mm	23	23	24	21	15	17	
Boom Gun  16 24 25 24 26 24  Canister Rd (AP), 90-105mm  12 13 7 15 6 15  CROWS  Demo Kit f/Engineers  26 26 22 13 22 13  Roller Platform f/Air Deploy  22 25 20 16 4 16  PLS "SHOE"  10 20 21 27 12 27  Enhanced Delivery Sys - Air  18 12 19 6 5 6  Explosive Standoff Mine Clearer  15 15 18 10 21 10  HEP Rd, 90-105mm  2 22 8 20 24 21  Mobile Counter Fire System  7 16 16 5 3 5  Mortar Fire Control System  6 4 3 1 7 2  Non-Lethel Acoustic System  Obj Crew Served Weapon  Obj Individual Combat Weapon  QR-LAW  21 19 10 8 9 8  Urban Target Rd f/ TOW  11 18 12 22 16 22  Volcano Light		Adv Optical Mortar Sights	27	27	27	11	20	11	
Canister Rd (AP), 90-105mm  CROWS  Demo Kit f/Engineers  26 26 22 13 22 13  Roller Platform f/Air Deploy  22 25 20 16 4 16  PLS "SHOE"  10 20 21 27 12 27  Enhanced Delivery Sys - Air  Explosive Standoff Mine Clearer  15 15 18 10 21 10  HEP Rd, 90-105mm  2 22 8 20 24 21  Mobile Counter Fire System  7 16 16 5 3 5  Mortar Fire Control System  Non-Lethel Acoustic System  Obj Crew Served Weapon  Obj Individual Combat Weapon  QR-LAW  Urban Target Rd f/ TOW  11 18 12 22 16 22  Volcano Light  25 21 23 25 27 25		AP Obstacle Breaching Sys	17	14	26	18	23	19	
CROWS       1       5       6       3       2       3         Demo Kit f/Engineers       26       26       22       13       22       13         Roller Platform f/Air Deploy       22       25       20       16       4       16         PLS "SHOE"       10       20       21       27       12       27         Enhanced Delivery Sys - Air       18       12       19       6       5       6         Explosive Standoff Mine Clearer       15       15       18       10       21       10         HEP Rd, 90-105mm       2       22       8       20       24       21         Mortar Fire System       7       16       16       5       3       5         Mortar Fire Control System       6       4       3       1       7       2         Non-Lethel Acoustic System       13       17       17       26       19       26         Obj Crew Served Weapon       3       1       1       2       1       1         Obj Individual Combat Weapon       20       3       11       7       8       7         QR-LAW       21       19       10 <t< td=""><td></td><td>Boom Gun</td><td>16</td><td>24</td><td>25</td><td>24</td><td>26</td><td>24</td><td></td></t<>		Boom Gun	16	24	25	24	26	24	
Demo Kit f/Engineers       26       26       22       13       22       13         Roller Platform f/Air Deploy       22       25       20       16       4       16         PLS "SHOE"       10       20       21       27       12       27         Enhanced Delivery Sys - Air       18       12       19       6       5       6         Explosive Standoff Mine Clearer       15       15       18       10       21       10         HEP Rd, 90-105mm       2       22       8       20       24       21         Mobile Counter Fire System       7       16       16       6       3       5         Mortar Fire Control System       6       4       3       1       7       2         Non-Lethel Acoustic System       13       17       17       26       19       26         Obj Crew Served Weapon       3       1       1       2       1       1       1         Obj Individual Combat Weapon       20       3       11       7       8       7         QR-LAW       21       19       10       8       9       8         Urban Target Rd f/ TOW       11		Canister Rd (AP), 90-105mm	12	13	7	15	6	15	
Demo Kit f/Engineers       26       26       22       13       22       13         Roller Platform f/Air Deploy       22       25       20       16       4       16         PLS "SHOE"       10       20       21       27       12       27         Enhanced Delivery Sys - Air       18       12       19       6       5       6         Explosive Standoff Mine Clearer       15       15       18       10       21       10         HEP Rd, 90-105mm       2       22       8       20       24       21         Mobile Counter Fire System       7       16       16       6       3       5         Mortar Fire Control System       6       4       3       1       7       2         Non-Lethel Acoustic System       13       17       17       26       19       26         Obj Crew Served Weapon       3       1       1       2       1       1       1         Obj Individual Combat Weapon       20       3       11       7       8       7         QR-LAW       21       19       10       8       9       8         Urban Target Rd f/ TOW       11		CROWS	1	5	6	3	2	3	
PLS "SHOE"  Enhanced Delivery Sys - Air  Enhanced Delivery Sys - Air  Explosive Standoff Mine Clearer  15		Demo Kit f/Engineers	26			· · · · · · · · · · · · · · · · · · ·	22	13	
Enhanced Delivery Sys - Air  Explosive Standoff Mine Clearer  15 15 15 18 10 21 10 HEP Rd, 90-105mm  22 22 8 20 24 21 Mobile Counter Fire System  7 16 16 6 3 5 Mortar Fire Control System  Non-Lethel Acoustic System  13 17 17 26 19 26 19 26 Obj Crew Served Weapon Obj Individual Combat Weapon QR-LAW 21 19 10 8 9 8 Urban Target Rd f/ TOW 11 18 12 22 16 22 Volcano Light		Roller Platform f/Air Deploy	22	25	20	16	4	16	
Explosive Standoff Mine Clearer  HEP Rd, 90-105mm  2 22 8 20 24 21  Mobile Counter Fire System  Mortar Fire Control System  Non-Lethel Acoustic System  Obj Crew Served Weapon  Obj Individual Combat Weapon  QR-LAW  Urban Target Rd f/ TOW  15 15 18 10 21 10  21 10  21 10  22 8 20 24 21  3 5  3 5  4 3 7  2 11  7 26 19 26  1 1 1  7 8 7  8 7  9 8 7  9 8 9 8  9 8 9 8		PLS "SHOE"	10	20	21	27	12	27	
HEP Rd, 90-105mm    2		Enhanced Delivery Sys - Air	18	12	19	6	5	6	
Mobile Counter Fire System       7       16       16       3       5         Mortar Fire Control System       6       4       3       1       7       2         Non-Lethel Acoustic System       13       17       17       26       19       26         Obj Crew Served Weapon       3       1       1       2       1       1         Obj Individual Combat Weapon       20       3       11       7       8       7         QR-LAW       21       19       10       8       9       8         Urban Target Rd f/ TOW       11       18       12       22       16       22         Volcano Light       25       21       23       25       27       25		Explosive Standoff Mine Clearer	_15_	15	18	10	21	10	
Mortar Fire Control System  Non-Lethel Acoustic System  Obj Crew Served Weapon  Obj Individual Combat Weapon  QR-LAW  Urban Target Rd f/ TOW  Mortar Fire Control System  6  4  3  1  7  2  19  26  19  26  1  1  7  8  7  28  1  1  7  8  7  8  7  9  8  9  8  9  8  Urban Target Rd f/ TOW  11  18  12  22  16  22  Volcano Light  25  21  23  25  27  25		HEP Rd, 90-105mm	2	22	8	20	24	21	
Non-Lethel Acoustic System       13       17       17       26       19       26         Obj Crew Served Weapon       3       1       1       2       1       1         Obj Individual Combat Weapon       20       3       11       7       8       7         QR-LAW       21       19       10       8       9       8         Urban Target Rd f/ TOW       11       18       12       22       16       22         Volcano Light       25       21       23       25       27       25		Mobile Counter Fire System	7	16	16	5	3	5	
Obj Crew Served Weapon       3       1       2       1       1         Obj Individual Combat Weapon       20       3       11       7       8       7         QR-LAW       21       19       10       8       9       8         Urban Target Rd f/ TOW       11       18       12       22       16       22         Volcano Light       25       21       23       25       27       25		Mortar Fire Control System	6	4	3	1	7	2	
Obj Individual Combat Weapon       20       3       11       7       8       7         QR-LAW       21       19       10       8       9       8         Urban Target Rd f/ TOW       11       18       12       22       16       22         Volcano Light       25       21       23       25       27       25		Non-Lethel Acoustic System	13	17	17	26	19	26	
QR-LAW 21 19 10 8 9 8 Urban Target Rd f/ TOW 11 18 12 22 16 22 Volcano Light 25 21 23 25 27 25		Obj Crew Served Weapon	3	1	1	2	1	1	
Urban Target Rd f/ TOW 11 18 12 22 16 22  Volcano Light 25 21 23 25 27 25		Obj Individual Combat Weapon	20	3	11	7	8	7	
Volcano Light 25 21 23 25 27 25		QR-LAW	21	19	10	8	9	8	
Volcano Light 25 21 23 25 27 25 9/10		Urban Target Rd f/ TOW	11	18	12	22	16	22	
		Volcano Light	25	21	23	25	27	25 Ω/	10

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# TACOM-ARDEC IBCT Capability Enhancements



Rank	Weapon/Item	Comments
11	Adv Optical Mortar Sights	Common mortar sight is part of IBCT Brigade Sets
19	AP Obstacle Breaching Sys	Army add on to USMC prod; Mat Rel in 2QFY02
23	Auto Reg 1-D f/155mm Proj	
24	Boom Gun	
15	Canister Rd (AP), 90-105mm	Initial approval granted
3	Com Remote Op Wpn Sys	A system being integrated into IBCT IAVs
13	Demo Kit f/Engineers	
6	Enhanced Delivery Sys Air	High on DA DCSLOG Cbt Svc Spt Enablers List
14	Excaliber Proj, 155mm	Funded Sys Dev & Demo (PM-ARMS)
10	Expl Standoff Mine Clearer	
9	ER DPICM Mort Rd, 120mm	Funded Concept & Tech Dev (ARDEC)
21	HEP Rd, 90-105mm	PM-TMAS evaluating; perhaps a future program
4	Jt LW 155mm How, Towed	Funded Sys Dev & Demo (PM-JLW); will replace IBCT M198s
5	<b>Mobile Counter Fire Sys</b>	



# TACOM-ARDEC IBCT Capability Enhancements



(continued)

Rank	Weapon/Item	Comments
2	Mortar Fire Control Sys	Funded Sys Dev & Demo (PM-MORT)
26	Non-Lethal Acoustic Sys	
1	Obj C-S Weapon, 25mm	Funded Concept & Tech Dev (JSSAP)
7	Obj Indiv Cbt Wpn	Funded Pgm Def & Rsk Reduce (PM-SA)
27	Palletized Load Sys "SHOE"	"Slipper" accepted; Production shortly (PM-HTV)
20	Prec Guided Mort Mun, 120mm	FY01 Congress \$6M +up to Cncpt/Tech Dev (ARDEC)
12	PI-SADARM, 155mm	
18	PI-WAM (Adv Hornet)	Funded Sys Dev & Demo (PM-MCD)
8	QR-LAW (MP whd f/AT4)	Funded PI program; to Production in FY04
16	Roller Platform f/Air Deploy	To be fielded within a year
17	SADARM Mortar Rd, 120mm	
22	Urban Target Rd f/TOW	Approved AMCOM program awaiting \$s
25	Volcano Light	Most likely will be fielded to IBCTs





# IBCT Armaments Summary

• Is the IBCT Going to be Lethal?

Damn Straight!

- Can IBCT Lethality be Enhanced in Short/Long Terms?

  Damn Straight!
- Can TEAM Picatinny Provide that Enhanced Lethality?

  Damn Straight!
- But, ... Not So Fast...

Think: Warfighters' Needs; Affordability; Logistics Impact; and "Not-So-Lethal" Stuff